In the Claims:

Please amend claims 1 and 34 as follows:

1. (Currently amended) A solution-processed thin film transistor formation method, comprising steps of:

preparing solutions for solution deposit of thin film layers, including a semiconductor solution having a solution-processed semiconductor material contained in a solvent;

using said solutions, forming solution-processed thin films including conductive solution-processed thin film contacts, semiconductor solution-processed thin film active regions, and dielectric solution-processed thin film isolations in a sequence and organization to form a solution-processed thin film structure capable of transistor operation; and

subsequent to a deposit of semiconductor material contained in a solvent used for ~~the solution-processed deposit of solution-processed semiconductor material used to form the~~ forming of the semiconductor solution-processed thin film active regions but prior to ~~the~~ deposit of any subsequent layers, selectively laser heating the semiconductor material contained in a solvent used for forming of the semiconductor solution-processed thin film active regions to vaporize the solvent to form the semiconductor solution processed thin film active regions.

2. (Original) The method of claim 1, wherein said step of preparing comprises dissolving semiconductor materials in a solvent to form the solution-processed semiconductor material.

3. (Original) The method of claim 2, wherein said step of forming conductive solution-processed thin films comprises direct printing.

4. (Original) The method of claim 3, wherein said step of forming conductive solution-processed thin films comprises ink jet printing.

5. (Original) The method of claim 2, wherein said step of preparing comprises dissolving small molecule organic semiconductor materials in a solvent to form the solution-processed semiconductor material.

6. (Original) The method of claim 2, wherein said step of preparing comprises dissolving a polymer semiconductor in an organic solvent.

7. (Original) The method of claim 6, further comprising a preliminary step of coating a surface unto which the polymer semiconductor in an organic solvent will be deposited, the coating comprising a film that will form directional structures in response to laser heating.

8. (Original) The method of claim 1, wherein said step of preparing comprises suspending semiconductor materials in a solvent to form the solution-processed semiconductor material.

9. (Original) The method of claim 8, wherein said step of forming conductive solution-processed thin films comprises direct printing.

10. (Original) The method of claim 9, wherein said step of forming conductive solution-processed thin films comprises ink jet printing.

11. (Original) The method of claim 8, wherein said step of preparing comprises suspending a small molecule organic semiconductor in an organic solvent.

12. (Original) The method of claim 8, wherein said step of preparing comprises suspending an inorganic semiconductor nano-particles in an organic solvent.

13. (Original) The method of claim 12, wherein said step of forming solution processed conductive thin film contacts comprises direct printing.

14. (Original) The method of claim 1, wherein said step of selectively laser heating further cures, anneals, sinters or re-crystallizes the semiconductor material.

15. (Original) The method of claim 1, further comprising a step of selectively ablating one or more of the conductive solution-processed thin film contacts, the semiconductor solution-processed thin film active regions and the dielectric solution-processed thin film isolations to pattern or complete patterning of a material being selectively ablated, wherein said step of selectively ablating is carried out during or after said step of forming.

16. (Original) The method of claim 15, repeated to form a plurality of thin film structures capable of transistor operation and further comprising a step of forming device isolations by ablating material between structures.

17. (Original) The method of claim 16, further comprising a step of filling the device isolations with dielectric solution-processed thin film material.

18. (Original) The method of claim 17, wherein the conductive solution-processed thin film contacts are patterned to form a circuit interconnect pattern.

19. (Original) The method of claim 15, wherein said steps of forming and ablating comprise the following steps:

depositing drain and source conductive solution-processed thin film material upon a substrate;

selectively ablating a transistor channel in the drain and source conductive solution-processed thin films to form drain and source contacts;

depositing active region semiconductor solution-processed thin film material over the drain and source contacts and the substrate;

depositing isolation region dielectric solution-processed thin film material over the semiconductor solution-processed thin film material; and

depositing gate conductive solution-processed thin film material upon the isolation region dielectric to form a gate contact.

20. (Original) The method of claim 15, wherein said steps of forming and ablating comprise the following steps:

depositing gate conductive solution-processed thin film material upon a substrate;

depositing isolation region dielectric solution-processed thin film material over the gate conductive solution-processed thin film material and the substrate;

depositing active region semiconductor solution-processed thin film material over the isolation region dielectric;

depositing drain and source conductive solution-processed thin film material upon the active region semiconductor solution-processed thin film material; and

selectively ablating a transistor channel in the drain and source conductive solution-processed thin film material to form drain and source contacts.

21. (Original) The method of claim 15, wherein said steps of forming and ablating comprise the following steps:

depositing gate conductive solution-processed thin film material upon a substrate;

depositing isolation region dielectric solution-processed thin film material over the gate conductive solution-processed thin film material and the substrate;

depositing drain and source conductive solution-processed thin film material upon the isolation region dielectric solution-processed thin film material;

selectively ablating a transistor channel in the drain and source conductive solution-processed thin film material to form drain and source contacts; and

depositing active region semiconductor solution-processed thin film material over the drain and source conductive solution-processed thin film material and the isolation dielectric.

22. (Original) The method of claim 15, wherein said step of selectively ablating uses a laser wavelength tuned to be absorbed by material being ablated and to minimally damage material underlying material being ablated.

23. (Original) The method of claim 15, wherein said step of selectively ablating is conducted through an optical mask to ablate multiple features simultaneously.

24. (Original) The method of claim 15, wherein said step of selectively ablating is carried out while varying one or both of a laser wavelength and intensity.

25. (Original) The method of claim 15, wherein said step of selectively ablating is applied to complete patterning of a material roughly patterned when deposited.

26. (Original) The method of claim 1, wherein the semiconductor material is ink jet deposited prior to said step of selectively laser heating.

27. (Original) The method of claim 1, wherein said step of preparing comprises dissolving small molecule organic semiconductor precursor materials in a solvent to form the solution-processed semiconductor material.

28. (Original) The method of claim 27, wherein said step of forming conductive solution-processed thin films comprises direct printing.

29. (Original) The method of claim 28, wherein said step of forming conductive solution-processed thin films comprises ink jet printing.

30. (Original) A solution-processed thin film transistor formation method, comprising steps of:

forming solution-processed thin film layers into a transistor structure;

during said forming, selectively heating semiconductor portions of the transistor structure via a laser, to modify the material state of semiconductor material from a solution deposited material state to a thin film layer material state.

31. (Original) The method of claim 30, further comprising a preliminary step of dissolving semiconductor materials in a solvent to form the solution deposited material state of the semiconductor material.

32. (Original) The method of claim 31, wherein said step of dissolving comprises dissolving a small molecule organic semiconductor in a solvent.

33. (Original) The method of claim 31, wherein said step of dissolving comprises dissolving a polymer semiconductor in an organic solvent.

34. (Currently amended) The method of claim 33, further comprising a preliminary step of coating a surface with a coating unto which the polymer semiconductor in an organic solvent will be deposited, the coating comprising a film that will form direction structures in response to laser heating.

35. (Original) The method of claim 30, further comprising a preliminary step of suspending semiconductor materials in a solvent to form the solution deposited material state of the semiconductor material.

36. (Original) The method of claim 35, wherein said step of suspending comprises suspending a small molecule organic semiconductor in an organic solvent.

37. (Original) The method of claim 35, wherein said step of suspending comprises suspending inorganic semiconductor materials in an organic solvent.

38. (Original) The method of claim 30, wherein said step of selectively laser heating further cures, anneals, sinters or re-crystallizes the semiconductor material.

39. (Original) The method of claim 30, further comprising, during said forming, patterning portions of the transistor structure via laser ablation, using a laser wavelength tuned to be absorbed by material being patterned and to minimally damage material underlying material being patterned.

40. (Original) The method of claim 39, wherein said step of patterning is applied to complete patterning of a material roughly patterned when deposited.

41. (Original) The method of claim 40, wherein the material roughly patterned when deposited is patterned as a result of an inkjet deposition process.

42. (Original) The method of claim 30, repeated to form a plurality of thin film structures capable of transistor operation and further comprising a step of forming device isolations by ablating material between structures.

43. (Original) The method of claim 42, further comprising a step of filling said device isolations with dielectric solution-processed thin film material.

44. (Original) A solution-processed thin film transistor including drain, source and gate contacts formed of conductive solution-processed thin film materials, a semiconductor solution-processed thin film material active region contacting the drain and source contacts and isolated from the gate contact by a dielectric solution-processed thin film material, the transistor being formed by a process comprising steps of:

direct printing a solution of semiconductor material;

depositing, in a rough pattern, the drain and source contacts; and

refining the rough pattern by selective laser ablation of the drain and source contacts; and

completing a semiconductor active region by selective laser heating the solution of the semiconductor material to vaporize solvent from the solution and leave a thin film of the semiconductor material.

45. (Original) The method of claim 44, wherein said step of refining creates a transistor channel.

46. (Original) The method of claim 44, wherein said step of refining is conducted through an optical mask to ablate multiple features simultaneously.

47. (Original) The method of claim 44, wherein said step of refining is carried out while varying one or both of a laser wavelength and intensity.